Appln. No. 10/632,918 Amd. dated June 10, 2004 Reply to Office Action of April 13, 2004

Amendments to the Specification

Please insert the following title before the first full paragraph on page 1, between lines 3 and 4:

FIELD OF THE INVENTION

Please insert the following title before the second full paragraph on page 1, between lines 10 and 11:

BACKGROUND OF THE INVENTION

Please insert the following title before the third full paragraph on page 3, between lines 7 and 8:

SUMMARY OF THE INVENTION

Please insert the following title before the fourth full paragraph on page 5, between lines 8 and 9:

BRIEF DESCRIPTION OF THE DRAWINGS

Please insert the following title between lines 17 and 18 on page 5:

DETAILED DESCRIPTION OF THE DRAWINGS

Please amend the first full paragraph on page 6 with the following amended paragraph:

As in the case of known balancing machines, the machine of the invention comprises a support and rotation means (indicated overall by 20) arranged

to support and lock the wheel 10 and to rotate it about its axis of rotation. In the embodiment shown in the figures, said means 20 comprises a shaft 21, supported by a bush 22 supported by the fixed frame 9 of the machine, and carrying at one end suitable means 23 to lock the wheel 10 such that its axis coincides with the axis A of the shaft 21 and to rotate it together with said shaft. Said means 23 possess a transverse contact surface 23a against which the wheel web 13 is mad_made_to abut, this latter advantageously defining a transverse reference plane for the machine operations. Alternatively, a different transverse reference plane can be chosen.

Please amend the last paragraph on page 6 spanning pages 6 and 7 with the following amended paragraph:

In the embodiment shown in the figures, said first sensor means 30 comprise a movable arm 31 carrying at its free end a feeler element 32 arranged to make contact with the application surface 11a of the wheel rim, and connected to means (not shown in the figures) for determining the geometrical position of the feeler 32[[;]]. the-The arm is movable by rotation about a pin 33 having its axis parallel to the axis A of the shaft 21 and by translation in the direction of this axis[[;]]. by-By virtue of said movements of the arm 31, the means 30 are able to determine the axial position of any transverse plane through the application surface 11a of the wheel rim and the radius (i.e. the radial distance from the axis A) of points on the surface 11a in correspondence with said transverse planes.

Please amend the first full paragraph on page 8 with the following amended paragraph:

Preferably the video camera is disposed in a position such that the axis B of its lens is in the closest possible position to the middle transverse plane between the edges 11b and 11c of the wheel rim 11 and is orientated as radially as possible, in order to frame the application surface 11a in the most symmetrically and centrally manner possible [[;]]. this This is achieved taking account of the overall size of the video camera and of those moving members of the machine lying within the wheel rim. The visual field of the video camera must also be such as to frame the entire axial dimension of the application surface 11a of the wheel rim 11 (together with a sufficiently wide angle in the transverse plane) [[;]]. if If this is not the case, the video camera must be made movable (for example by swivelling it in the axial plane) to be able to selectively frame every point of the axial dimension of the surface 11a.

Please amend the last paragraph on page 9 spanning pages 9 and 10 with the following amended paragraph:

On rotating the wheel 10 by means of the motor 24, the wheel imbalance factors are determined by known methods and means, and the data obtained, together with the data originating from the first sensor means 30 and from the second sensor means 40, are processed by the machine processor means to determine the value of each balancing mass M and the position of its point of application on the surface 11a, calculated in correspondence with the respective plane P1, P2[[;]]. fer-For practical reasons, the application position determined by

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the processor can also be slightly displaced from the two planes P1 or P2, for example such that the value of the mass corresponds exactly to a value lying within a discrete range of commercially available balancing mass values available to the operator, or to a multiple of it.